Robert F. Kischko PE

Associate

Stantec

Mr. Kischko is an senior electrical engineer with over 30 years experience in planning and design. His responsibilities include the review and design of electrical engineering documents and specifications for commercial, institutional and municipal projects. Robert's experience includes energy evaluations, electrical utility systems, and substation designs as well as building and industrial electrical distribution. He has been responsible for project management, conceptual design to final design, specifications, cost estimates, and field inspections. He has designed electrical system upgrades for campus and school dormitories, and energy efficient designs for commercial buildings and historic structures. Designs have included power, lighting, fire alarm, communication, and emergency electrical systems for educational, hospital and health care facilities, residential complexes, and industrial facilities. Robert is currently on the Board of Professional Engineering for the State of Vermont and serves as the Vice-Chairman.

EDUCATION

American Electric Power School of Substation Design, Canton, Ohio, 1970

REGISTRATIONS

Professional Engineer #5977, State of Vermont

PROFESSIONAL ASSOCIATIONS

Member, Northeast Public Power Association

Member, Northeast Association of Electrical Cooperatives

Member, National Council of Examiners for Engineering & Surveying

Member, National Fire Protection Association

PROJECT EXPERIENCE

Otis Air National Guard Base Replacement of Transformer at Electric Substation, Falmouth, Massachusetts
Project Manager responsible for replacement of an existing 5000KVA transformer that failed with a new 7500KVA transformer at the existing electric substation. The project included the following: coordination studies, site design preparation, evaluation of the existing foundation and oil containment systems to ensure their adequacy for the new replacement transformer, connection modifications (line and load), and control and monitoring systems.

Burlington International Airport Parking and Terminal - Phases I, II & III, South Burlington, Vermont
Design and design review for electrical systems and electrical engineering services for new parking garage with + 3500 parking spaces (phased over numerous years).

Logan International Airport, Boston, Massachusetts
*Electrical Engineer responsible for coordinating field investigations to ascertain type, size, and condition of all 4.16 kV and 13.8 kV underground (electrical vault located) oil switches. Study phase included a report detailing existing conditions and proposed recommendations based on results of field investigations and presentation meetings with the Authority. A preliminary plan was prepared to upgrade existing underground oil switches with new manual above-grade switchgear to ensure the highest level of redundancy for the airfield electrical distribution system. A comprehensive basis of design was prepared for the final design phase to upgrade these critical electrical elements. Design phase included over 45,000 lf of new underground *kV cable in concrete reinforced duct banks, 25 pad-mounted SFG gas insulated switchgear assemblies and detailed phasing plans. The project was constructed without a change order, no formal requests for information, and was built on budget and on time.*

Landfill Gas to Energy Substation, Delhi, New York
Provided electrical design for the 1.0 megawatt gas to energy facility that included substation layout and general arrangements for the electrical facilities. Delaware County Electric Cooperative undertook this project to expand its green power base and explore the feasibility of developing a landfill gas to energy facility at the county landfill site in nearby Walton, NY.

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Vermont Electric Cooperative, Enosburg Falls Substation, Enosburg, Vermont

Project Manager for the electrical design for a replacement switching station with a new 46kV substation. Services include civil, permitting support and structural design coordination as well as landscaping and permit support for the State of Vermont Act 248 Permit, substation grounding design and support for materials procurement with the Co-operative.

Camp Johnson Electrical Backup Generation Complex, Colchester, Vermont

Design Engineer for a new generator building and electrical design for a combination of electrical generators to support its operations at Vermont's National Guard headquarters. The electrical generation system consists of multiple generators sized to meet both today's peak kW demand of approximately two units rated at 455kW each and proposed future loads. The project included pad-mounted switchgear, 1000KVA power transformer, and the capability to support the local utility at 4160 volts with future plans to upgrade to 12470 volts.

Coventry Landfill Gas to Energy Plant, Coventry, Vermont
Client: Washington Electric Cooperative

As electrical engineering consultant to Washington Electric Co-Op, provided engineering support services for the interconnection of an independent power producer. Prepared the request for proposals for developer bidding, reviewed the developer's proposed design and defined the protective measures required for the WEC system. The 4.8MW facility initially includes the additional 1.6 MW fourth generating unit. Engineering included permit support for local and State of Vermont Act 248 permits.

VT ANG Campus-Wide Underground Electrical Distribution System Design, Burlington, Vermont

Project Manager and electrical engineer responsible for upgrading the electrical distribution system at the Vermont Air National Guard Base. Services involved replacing the old system with a 15kV, two-loop, underground primary distribution system, upgrade and replacement of 25 existing pad-mounted transformers and six pad-mounted switches. In addition, the design included specifications for upgrading existing services into most buildings on the base.

Otis Air National Guard Base West/Main Electrical Substation, Mashpee, Massachusetts

Electrical Engineer responsible for electrical system feasibility study for replacement of 25/5 kV, 4.5 MVA substations with a new 25/15/5 kV, 10 MVA low-profiles and seven-feeder substation. Design included both feasibility study phase and final design phase. The project consisted of the following key elements: eight feeders of metal-enclosed dual voltage 4/15 kV class vacuum circuit breakers housed within sheltered aisle switchgear and complete relaying package, 125v DC battery system and building environmental controls.

Mt. Washington Summit Facility, Sargent's Purchase, New Hampshire
Client: NH DRED

Project Manager for the electrical design and project coordination for grid power and fiber optic systems for the summit facilities at Mount Washington State Park. Responsibilities include review of the electrical engineering in support to bring commercial grid power to the Northeast's highest peak (6,288'). This includes a new point of electric service, transmission line running underground, and a new summit electrical and communications building. Unique about this project were the extreme design conditions, including 0-250 mph winds, -50 to 100 F temperatures, 0 – 100% RH, 0 –4' of ice, extreme slope of the mountain and the client's desire to produce minimal visual impact. Design review included field coordination of survey work of the proposed 3.2-mile transmission line route and existing summit facilities, a study for a replacement electrical building and tie-in to the existing summit electrical distribution systems and assistance in design of transmission line.

Washington Electric Cooperative Maple Corners Substation, Maple Corners, Vermont

Project manager and design engineer for the electrical design for a 34.5/12.47kV two-feeder replacement substation. Services included civil, structural, and electrical as well as landscaping and permit support for the State of Vermont Act 248 Permit, substation grounding design and support for materials procurement with the Co-operative.

Green Mountain Power Richard Substation, Richmond, Vermont

Professional engineering services for feasibility study and design of the Richmond Substation. Design concepts for four options for the reconstruction of a 34.5 kV to 12.47 kV two feeder substation in preparation for Act 248 state review process.

New Hampshire Electric Cooperative Melvin Village Substation, Moultonborough, New Hampshire

Project Manager responsible for electrical design engineer for the 34.5/12.47 kV 4-feeder replacement substation. Engineering included civil, structural, and electrical, as well as landscaping and permit support for the local planning and zoning. Design support also included substation grounding and support for materials procurement.

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Washington Electric Cooperative South Walden Substation, South Walden, Vermont

Project Manager and electrical engineer for the 34.5/12.47 kV 3-feeder replacement substation. Engineering included civil, structural, and electrical as well as landscaping and permit support for the State of Vermont Act 248 Permit. Support also included substation grounding design and support for materials procurement.

Washington Electric Cooperative Moretown Substation, Moretown, Vermont

Electrical engineer for the 34.5/12.47 kV 3-feeder replacement substation. Engineering included civil, structural, and electrical, as well as landscaping and permit support for the State of Vermont Act 248 Permit. Support also included grounding design and materials procurement.

Green Mountain Power Wind Generation Study, Readsboro, Searsburg, Vermont

Electrical Engineer responsible for consulting on technical items and preparing design build technical specification on transmission line, distribution line, and substation for wind generation. Developed cost opinions and routing options for new transmission and distribution power lines, and evaluated substation configuration and access road options to support construction and maintenance of the wind powered generator units.

Washington Electric Cooperative Short/Long Term Plans, East Montpelier, Vermont (Project Manager)

Assisted in developing a work plan which includes power supply, system performance, reliability, backup, structure inspection, conductor aging, transfer capacity, system losses, load analysis, system planning, reliability, and construction costs. Washington Electric Coop is a 9,800 member electrical utility with over 1,600 miles of distribution and transmission lines in eight substations.

Providence Power Partners, Johnston, Rhode Island

Electrical Engineer responsible for designing overhead power line at 25 kV, 10MAV substation to support the utility grid connection, and interface conduits and cabling design to the generation switchgear for new generators and metering configuration.

Citizens Utilities Distribution Circuit Analysis, South Hero, West Gover, Vermont

Project Manager responsible for circuit efficiency analysis of the numerous electrical distribution circuits originating out of the South Hero and West Glover Substations. Performed voltage drop calculations and recommended ways to improve circuit performance, developed a least-cost analysis plan for various options and provided the client with a project package for submittal to the regulatory body.

Citizens Utilities Richford Substation, Richford, Vermont

Project Manager responsible for preliminary layouts for the redesign for an outdated, existing 46.0 kV/4.16 kV – 3/5 MVA substation with one feeder and replace it with a two-feeder, 46.0 kV/12.47 kV – 5/7 MVA design. In order to retain the rustic look of the wood pole structure, Citizens Utilities chose to design the substation with wood. Also provided least-cost analysis and regulatory testimony for Public Utilities Commission approval.

Richmond Substation, Richmond, Vermont

Professional engineering services for feasibility study and design of the Richmond Substation which includes the first ever joint-use substation between Vermont Electric Cooperative and Green Mountain Power. Design concepts included four options for reconstruction of a 34.5 kV to 12.47 kV two-feeder substation in preparation for the Act 248 state review process.

Citizens Utilities Derby Substation, Derby, Vermont

Project Manager responsible for redesign of an outdated, existing 46.0 kV/12.47 kV – 5 MVA substation with one feeder to replace it with a two-feeder 7 MVA design. In addition to the design, provided least-cost analysis and regulatory testimony for Public Utility Commission approval.

Citizens Utilities Substation Contingency Studies, Derby,West Charleston, Island Port, Vermont

Project Manager responsible for contingency study and voltage drop analysis involving three substations, six distribution circuits, and an electrical distribution area encompassing 30 miles. The issue was whether the Derby Substation could provide quality power to the connected loads of West Charleston and Island Pond areas in the event of a disruption to the 46.0 kV transmission line or a substation outage at West Charleston Substation. A major concern was the 30-mile distance between the Derby and Island Pond substations. It was determined that with larger wire and the installation of voltage regulators at various strategic locations, Derby Substation could service all customers regularly fed by West Charleston and Island Pond.

Dorset Street, South Burlington, Vermont

Designed and coordinated between utilities for power, telephone, and cable TV utilities for a 1.25-mile section of an urban street.